Claims 23-30 of the above-mentioned patent application have been rejected under §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim Applicant's invention. It is stated in the Office Action that it is unclear what is meant by "total volume fraction" and that that term has not been defined. Applicant, however, traverses. Applicant clearly describes and defines this term beginning on page 18, line 1, and continuing through page 19, line 13. Therein it is stated that total fractional volume, i.e., total volume fraction or "Φtotal," is the sum of volumes created by solids in the coating formulation. To clarify this definition, Applicant has amended claim 23 so that "solids" is recited after "coating," second instance. In view of the above amendment and the above remarks, Applicant respectfully requests withdrawal of the §112, second paragraph, rejection.

Claims 14 – 22 are rejected under 35 U.S.C. §102(b) as being anticipated by Abe et al. Applicant, however, respectfully traverses. As stated during earlier prosecution, and most recently stated in Applicant's Appeal Brief received by the Patent Office on April 1, 2002, Abe et al. does not disclose porous inorganic oxides having a pore volume in the range of 0.6 – 3.0 cc/g. As mentioned in Applicant's earlier Appeal Brief, Abe et al. discloses colloidal silica, and it is respectfully submitted that those of ordinary skill in the art would generally recognize that colloidal silica is generally not porous. Applicant's reference to U. S Patent 3,007,878, on page 14, goes no further in showing that Abe anticipates Applicant's invention. Applicant refers to the '878 patent because he can use the techniques described therein to modify his inorganic oxide. Applicant, however, goes beyond the '878 patent by applying the techniques to porous inorganic oxides. It is also respectfully submitted that it is not seen where Abe et al. discloses a non-ionic latex. Accordingly, it is submitted that the subject matter of claims 14 – 22 is not inherently disclosed by Abe et al., and Applicant respectfully requests withdrawal of the §102 rejection based on Abe et al.

Claims 1 – 3, 5 – 8, and 13 are rejected under 35 U.S.C. §103 as being unpatentable over Stokes et al. in view of Alexander et al. Applicant respectfully traverses. Briefly, it is respectfully submitted that Stokes does not expressly describe nor suggest non-ionic latexes. Mere mention of a polyvinyl acetate latex does not describe or suggest such a latex, especially in view of evidence (Roche literature) submitted by Applicant. Applicant has already submitted literature showing a variety of polyvinyl acetate latex polymers, of which only a portion are

non-ionic. Insofar as the Examiner has concluded that the term "polyvinyl acetate" suggests a certain chemical structure, Applicant submits that this in error. Stokes fails to describe any specific structures with respect to polyvinyl acetate latex. It is, therefore, respectfully submitted that one of ordinary skill in the art would consider polyvinyl acetate as generic without limitation to charge and that any charge could be applicable to a "polyvinyl acetate" latex. Attached are pages 955, 961 and 962 from Encyclopedia of Chemical Technology, 4th ed., 1997, describing various polyvinyl acetate emulsions, i.e., latexes. It is known to the person of ordinary skill that the charge of a latex depends on surfactant or emulsifier used. It is stated therein that the most commonly used surfactants are anionic surfactants, e.g., anionic sulfates and sulfonates, in addition to cationic or nonionic surfactants. It is submitted the enclosed pages, along with the Roche literature, is more than ample evidence to support Applicant's position. On the other hand, the Examiner has not presented any evidence to support the position that one of ordinary skill would be motivated to specifically select a nonionic latex. Regardless, Applicant has also submitted tests and examples rebutting any *prima facie* case of obviousness by showing that the latex charge is an important factor in Applicant's formulation vis-à-vis printing properties of the resulting coating. Such advantages are simply not suggested by Stokes et al.

It is also respectfully submitted that Stokes et al. does not disclose cationic porous inorganic oxide particles, and given that Alexander et al. discloses employing cationic colloidal silica, it is respectfully submitted that if Alexander et al.'s teaching is combined with Stokes et al.'s teaching, one of ordinary skill in the art would arrive at a coating formulation containing non-porous particles. Withdrawal of the §103 rejection based on Stokes and Alexander et al. is requested.

Claims 10 – 12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over the aforementioned combination of Stokes and Alexander, further in view of Williams et al. Applicant, however, respectfully traverses. Williams et al. has been cited in this rejection for its disclosure of a coating composition containing a quaternary ammonium compound. However, it is respectfully submitted that even if Williams et al.'s teachings are combined with the aforementioned combination of Stokes and Alexander et al., it is respectfully submitted that one of ordinary skill in the art does not arrive at a coating composition comprising porous particles. As remarked above, Alexander et al.

discloses colloidal particles, it is respectfully submitted that those of ordinary skill in the art would generally recognize those particles as being non-porous. Withdrawal of the §103 rejection of claims 10 – 12 is requested.

Claim 4 has been rejected under 35 U.S.C. §103(a) as being unpatentable over the above-mentioned combination of Stokes et al. in view of Alexander et al., further in view of Vassiliades et al. Applicant, however, respectfully traverses. Vassiliades et al. has been cited for its disclosure of microcapsules comprising polymeric shell of polyvinyl alcohol encapsulating a polymeric core. However, it is respectfully submitted that even if Vassiliades' disclosures combined with the aforementioned combination of Stokes and Alexander et al., it is respectfully submitted that one of ordinary skill in the art would not arrive at Applicant's coating composition comprising porous particles. Withdrawal of this rejection is requested.

Claims 1 – 3, 5 – 8, 10, 13, and 23 – 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Abe et al. Applicant, however, respectfully traverses. Applicant earlier indicated above that Abe et al. refers to colloidal particles and Applicant has submitted evidence that those skilled in the art recognize such materials as being non-porous. It is therefore respectfully submitted that the Examiner is in error to state that the pore volume of Abe et al.'s silica must have the pore volume recited in Applicant's claims 1 – 3, 5 – 8, 10, and 13. It is also respectfully submitted that Applicant has not pointed to any disclosure in Abe et al.'s patent which motivates one of ordinary skill in the art to determine optimum solids content, volume fraction, and weight ratio of nonionic latex to modify inorganic oxides. Insofar as the Examiner is relying on personal knowledge, Applicant respectfully requests the Examiner submit the appropriate declaration in support of that position. Accordingly, Applicant respectfully requests withdrawal of the above-mentioned §103 rejection based on Abe et al.

Claims 4 and 9 are rejected under §103 as being unpatentable over Abe et al. in view of the earlier discussed Vassiliades patent. However, Applicant respectfully traverses for reasons discussed above. Briefly, Vassiliades et al. has been cited for its disclosure of microcapsules. However, Abe et al. fails to disclose porous particles recited in claims 4 and 9, and Applicant respectfully submits that even if one of ordinary skill in the art were to combine Vassiliades disclosure with Abe et al.'s disclosure, one would not arrive at Applicant's

invention. Accordingly, Applicant respectfully requests withdrawal of the §103 rejection based on Abe et al. in view of Vassiliades et al.

In summary, Applicant respectfully submits the Examiner has taken positions based on assumptions unsupported by the references of record to supplement silences in the prior art. Rejections based on this type of analysis are impermissible and withdrawal of those rejections are requested. Indeed, Applicant respectfully requests notification to that effect in the form of a Notice of Allowability.

Respectfully submitted,

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23. (Once Amended) A high solids coating composition comprising

(a) polyvinyl alcohol;

(b) nonionic latex; and

(c) surface-modified porous inorganic oxide

wherein the coating solids has a total volume fraction in the range of 0.25 to 0.50.

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